

CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society
Of America

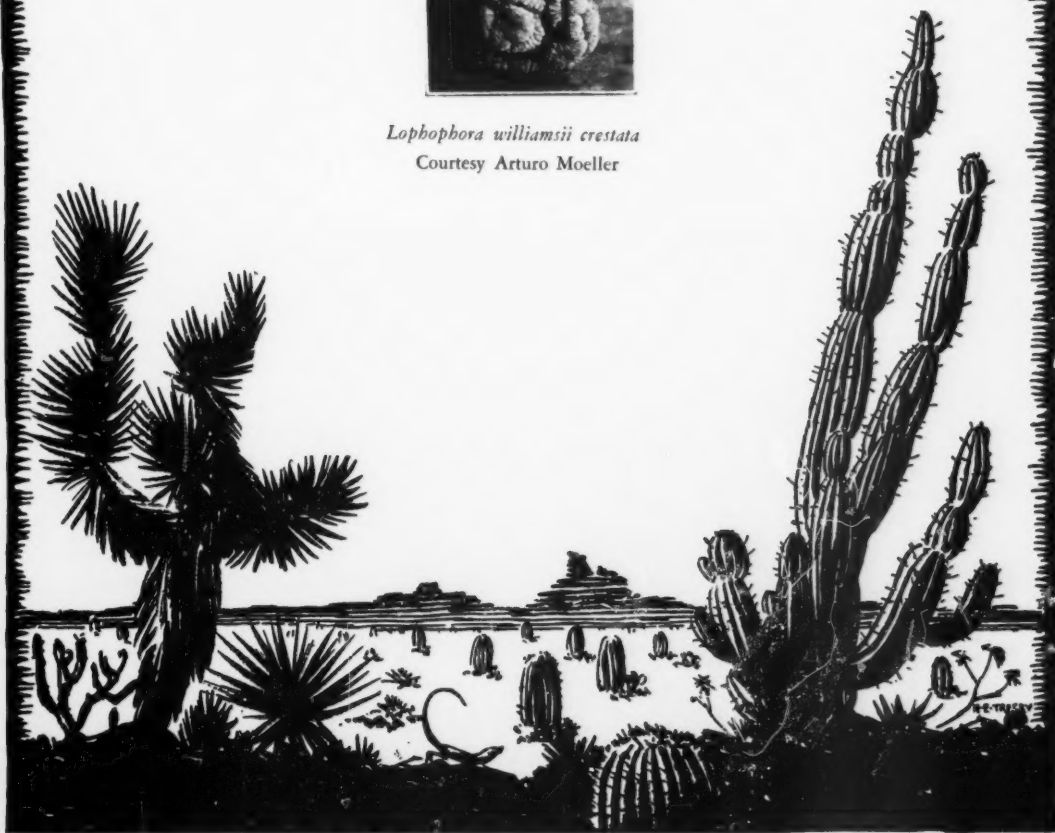
VOL. 2

JULY, 1930

No. 1



Lophophora williamsii crestate
Courtesy Arturo Moeller



Journal of the
CACTUS AND SUCCULENT SOCIETY OF AMERICA

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THE CACTUS AND SUCCULENT SOCIETY OF AMERICA

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A monthly magazine to promote the Society and devoted to Cacti and Succulents for the dissemination of knowledge and the recording of hitherto unpublished data in order that the culture and study of these particular plants may attain the popularity which is justly theirs. "The Cactaceae," by N. L. Britton and J. N. Rose, has been adopted by this Journal for purposes of identification. (Membership and subscription \$3.00 per year, foreign \$3.50.) Mail membership application and subscription to the Secretary, Mr. W. M. Ketteringham, 610 West 65th Street, Los Angeles, Calif.

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VOLUME II

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PRESIDENT'S COLUMN

It has occurred to me that perhaps the many members of the Society residing outside of Los Angeles might be tired of so much show talk and prize lists, etc., in this and the preceding issues of the Journal.

Our object in holding this show was twofold—first, that by showing a large collection of cactus and succulents that could be seen at one time under one roof we hoped to increase the wide spread interest in these wonderful plants and refute the misstatements that have been made regarding members of our Society robbing the desert. In this effort we were more than successful. Words can not describe the beauty of the show room of over 36,000 square feet floor space filled to capacity with cactus and succulent plants, the vast majority of which were exotic, many imported from the far corners of the world, others grown from seed.

The comparatively few varieties from our local desert were of course represented and their appearance showed a great improvement over those growing in the wilds, this improvement caused by the kindly treatment of expert hands.

Our second objective was to increase the funds in our treasury to enable us to give you a better Journal. In this we were not so successful, perhaps the cause could be partly laid to the fact that we chose a time

that included a public holiday and perhaps partly to lack of cooperation from the large newspapers in giving us adequate publicity. I imagine if we could have arranged to have Mr. Mesembryanthemum run away with Mr. Coryphantha's wife, or if Miss *Astrophytum ornatum* had strangled her hybridised children, we would have had plenty of publicity. However, the fact remains we did not get sufficient paid admissions to accomplish our second objective.

At this time I wish to request our friends who feel the cause is worthy to take out life memberships. Each membership received will be greatly appreciated by the officers of the Society and by the members who will receive the Journal. Our by-laws do not now provide for sustaining members but in a later issue of the Journal will appear an honor list of members who have made contributions to better the Journal. The amounts contributed will not be published.

Personally, and in behalf of the Society, I wish to thank all who gave so generously of their time in helping to make this show a success and to those who gave prizes.

R. E. WILLIS, President,
 2721 Bellevue Ave., Los Angeles, Calif.

MATERIAL FOR A CRITICAL REVISION OF THE CRASSULACEAE

By S. SCHONLAND

Critically reviewed by ERIC WALTHER

In the "Transactions of the Royal Society of South Africa," Vol. 17, part 3;
pages 151 to 193; 1929. Published by the Society at Cape Town.

The above paper by Dr. Schonland came to our hands the day our popular little summary finally went to press, too late to permit consideration of the wealth of information it contains. Use is made of this opportunity to shortly review the more essential features of Dr. Schonland's paper, and incidentally to point out such changes in nomenclature as may be advisable.

In his paper, the well-known monographer of the *Crassulaceae* in Engler & Prantl's "Naturliche Pflanzenfamilien" gives the results of his lifelong studies in this genus. His investigations, founded primarily on an unparalleled acquaintance with the material in the field, were climaxed by a complete examination of such material as is preserved in the various herbaria of Europe, etc. Most important in this respect were the collections at Kew, the British Museum, Berlin, Oxford, Paris, etc., containing the types of Linnaeus, Lamarck, Thunberg, Willde-

now, Jacquin, DeCandolle, Harvey, Ecklon & Zeyher, Drege, etc. As a result of these comparisons Dr. Schonland was able to correct some almost antediluvian errors which are further dealt with below.

Proceeding to a review of the more outstanding features of the paper, we find that Schonland retains as valid the genera *Rocbea*, *Dinacria*, *Grammanthes* and *Pagella*, but merges *Tillaea*, Linn. and *Tillaeastrum* Britt. with *Crassula*, an arrangement apparently well substantiated. Under his remarks on relationships he states that *Crassula* is derived from the generally diplostemonous¹ genus *Sedum*, whose section *Procrassula* consists of several species coinciding with *Crassula* in the number of stamens, but differing in having alternate leaves.

¹diplostemonous: having twice as many stamens as petals.

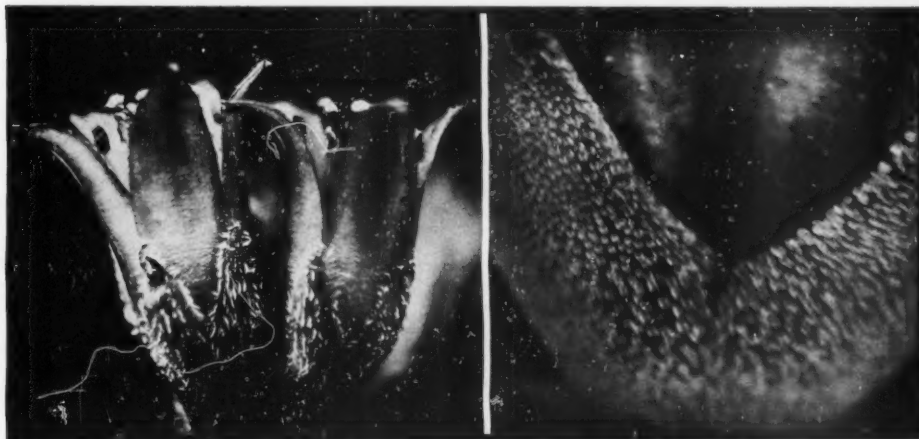


Fig. 1. *C. dregeana* Harv. Two flowers; app. x 12. Photo by E. W.

Fig. 2. *C. dregeana* Harv. One leaf-pair with papillae; app. x 12. Photo by E. W.

Schonland's first Section *Tillaeoideae* he considers the most primitive, containing forms most nearly resembling those from which the others have been evolved, an argument borne out by the wide distribution of some of the species, as *C. (Tillaea) vaillantii*, for instance. The members of this section are nearly all small annuals inhabiting moist places, a most interesting ancestry for a genus so typically xerophytic. Only one species of this section is commonly cultivated here, the perennial *C. lycopodioides*. Here also belongs the recently introduced *C. corallina* Thunbg., seen by the writer at E. O. Orpet's place at Santa Barbara, and figured in Marloth's "Flora of South Africa," Plate 5.

Of Schonland's Section *Stellatae*, group *Pellucida*, we have *C. marginalis* Dryand., which name he restores, in place of *C. centauroides* L., the latter being founded on a mixture of several species. Group *Spatulata* of the same Section contains our *C. spatulata* Thunbg. Into the next group, *Lactea*, are placed *C. lactea* Soland. and *C. multicava* Lem. (*C. quadrifida* Baker).

Group *Arborescens* consists of *C. arborescens* Willd. and *C. argentea* Thunbg., the last a pseudonym of the familiar *C. portulacae* Lam. Schonland states that Thunberg's material is unmistakably this species, but fails to account for Baker's considering this synonymous with *C. falcata*. Surely the latter is much more silvery than *C. portulacae*; and in fact a better example of a misapplied name would be hard to find.

The group *Cordata* derives its name from *C. cordata* Thunbg., only recently introduced by E. O. Orpet and quite distinct from *C. cordata* Lodd., the last really a synonym of *C. spatulata* Thunbg.

Section 3, *Tuberosae*, taking its name from the tuberous roots, contains among others *C. saxifraga* Harv. mentioned in our notes as worthy of being introduced.

Section 4, *Campanulatae*, is quite a large one with many groups, of which we can mention only a few. Of group *Perforata* we grow *C. perforata* Thunbg. (*C. perfossa* DC.) and *C. rupestris* Thunbg. (*C. monticola* N. E. Brown). The group *Perfoliata* consists of only *C. falcata* Wendl. and *C. perfoliata* L., both well-known here. Group *Vaginata*, with nine species, includes the true *C. rubicunda* E. Mey. Group *Scabra* includes *C. dregeana* Harv., which name we are inclined to apply to the recent introduction of our friend Mr. Beecroft referred to in our paper as *C. adgavensis* Hort. This is a very showy, red-flowering species; and our material

agrees well with the available descriptions except for its apparently more robust habit. This last has many forms and varieties, some of which are cultivated in Europe and on account of their brilliantly colored flowers are well worth introducing. We reproduce herewith two photos of this species, figure No. 1 showing a cluster of two flowers, and figure No. 2 illustrating the remarkable papillae that characterize this species. These papillae densely cover the leaves, stems and calyx; and are derived from the scarred hairs common in other species of the genus.

The exact purpose or function of these papillae is still under dispute, with some evidence tending to prove that they serve to absorb moisture from the air. The group *Setulosa* takes its name from *C. setulosa*, an extremely variable species evidently not known here as yet. The others of the group are perhaps equally variable, which may account for the difficulty in naming two that we grow here. According to Schonland's key, both of these species belong to one species, i.e., *C. schmidtii* Reb. In our recent paper they were listed as *C. impressa* and *C. cooperi*, respectively; and surely they appeared to be sufficiently distinct to entitle them at least to varietal if not specific rank. (Since the present lines were written the white-flowered form has flowered, and we are inclined to think it identical with *C. sedifolia* N. E. Br. Note by E. W.) Group *Rosularis* has *C. rosularis* Harv., known to us. Then follows group *Turrita*, with such interesting forms as *C. barbata*, *hemisphaeria* and *turrita*, some of which have recently been introduced here. Group *Arta* contains a number of species with papillose leaves, and the unidentified species of Mr. Willis' collection may belong here.

Of Section 5, *Sphaeritis*, with 6 groups, we have possibly *C. trachysantha*, the only representative of the group so named. Coming to group *Namaquensis*, we find some further forms with papillose leaves, and the above-mentioned plant of our Mr. Willis may be identical with *C. namaquensis* var. *brevifolia* Schoenl. Two views of the plant in question are shown in photos No. 3 and 4, which we owe to the indefatigable energy of friend West. Our identification is based on these pictures, and requires to be verified from fresh material.

Section 6, *Globulea* Harv. is distinguished by the thickly mucronate apex of the petals. A recently introduced plant listed in our key as *C. obvallata* seems to belong here, and we should be glad of some flowering material in order to check this determination. Section 7,

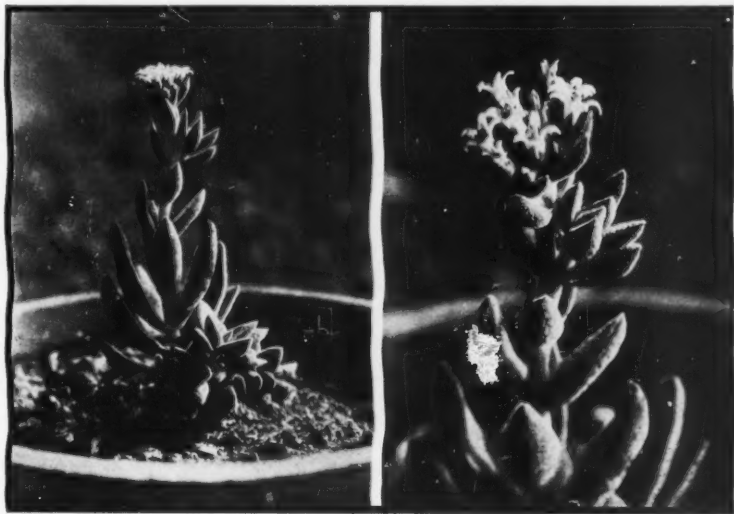


Fig. 3. *C. namaquensis* var. *brevifolia* Schoenl. Habit of plant; app. x $\frac{3}{4}$.

Fig. 4. *C. namaquensis* var. *brevifolia* Schoenl. Close-up of Flower-cluster; app. x 2.

Pyramidella (Harv.), consists of a number of extreme xerophytes which unfortunately are monocarpic, i.e., they die after producing seed but once. Of these, *C. columnaris* and *C. pyramidalis* have been mentioned as of sufficient interest to be worth growing. This concludes the treatment of Sections and groups.

Each group is preceded by a key to the species which should prove very useful to the student. Personally, we found the absence of a clear key or table to the Sections and groups almost the only lack in this otherwise admirable paper.

But the paper's most important contribution to science is unquestionably the clearing up of confused synonyms, a work which must have taken much time and energy. To illustrate, the index to *Crassula* proper requires about 530 lines or items to deal with a total of 223 valid names, indicating the existence of about 5 names for every two sound species. A number of changes from currently accepted names were inevitable, and those of interest to us are summarized below.² The continual changing of names is the bane of every student, and justified only if aiming at ultimate stability. Extension of the list of "Nomina conservanda"³ by the

International Botanical Congress meeting at Cambridge, England, next August, to include specific names, would seem to be most desirable.

Incidentally, a total of 25 new species, all South African, are also described by Dr. Schonland.

In conclusion we permit ourselves to compliment Dr. Schonland on the completion of what is easily the most valuable contribution to our knowledge of the genus since Harvey's "Flora Capensis," and which is destined to become the foundation of all further studies on this subject.

²If Dr. Schonland's changes are accepted, the following corrections would have to be made in the reviewer's list of synonyms as given in the January number of this "Journal":

centauroides L.	.....	marginalis	Dryand.
cooperii	.....	schmidtii	Regel
cordata	Solan	—this should read	cordata Thunbg.
elata	Dinter	.....	nodulosa Regel
impressa	N. E. Brown	.....	schmidtii Regel
monticola	N. E. Brown	.....	rupestris Thunbg.
perforata	DC.	.....	perforata Thunbg.
portulacea	Lam.	.....	argentea Thunbg.

³Nomina conservanda: list of generic names retained in spite of the fact that they are not the oldest, but which have been in use so long as to make their change inadvisable.

FLOWERS

By YSABEL WRIGHT

Illustrated by MARGARET KINCHER

A beginner, floundering about among joints and spines while attempting to identify specimens of cactus, eagerly welcomes the brilliant light that the many colored and varied flowers shed upon family relations.

Just for the sake of beginning at the beginning it should be said that a flower consists of a basal portion called the ovary containing ovules which are potential seeds. The ovary bears at its apex a style and some stamens. The style is a single, tapering stalk, sometimes branching, bearing at its upper end, or ends, a stigma of varying shape. The style is more or less surrounded by the stamens which, in cactus blossoms, are always very numerous. A stamen consists of a filament, or thread-like stalk upon the upper end of which is a knob called the anther. The anther bears the dust-like pollen which bees, or other carriers, take to the moist, naked surface of the stigma. Surrounding the stamens and style are the inner and outer floral envelopes, which, in many flowers, are spoken of as the corolla and calyx, and their respective sections as petals and sepals because the corolla and calyx are quite different in shape, color, structure and function. In many of the cactus flowers, however, modern practice prefers to refer to these parts as perianth segments because they are very numerous and often poorly differentiated. For example, the inner and outer perianth segments of many cactus flowers vary but little in shape from each other, and the outer, which in other flowers would be called the sepals, shade gradually from dark and sober hue to the often brilliant colors of the inner segments, which would be the petals.

The principal characteristic of perianth segments, aside from color, by which different species can be distinguished is their shape and it is the technical terms employed to describe these shapes that the illustrations accompanying this article try to make clear.

The differences between cactus flowers and other flowers are:

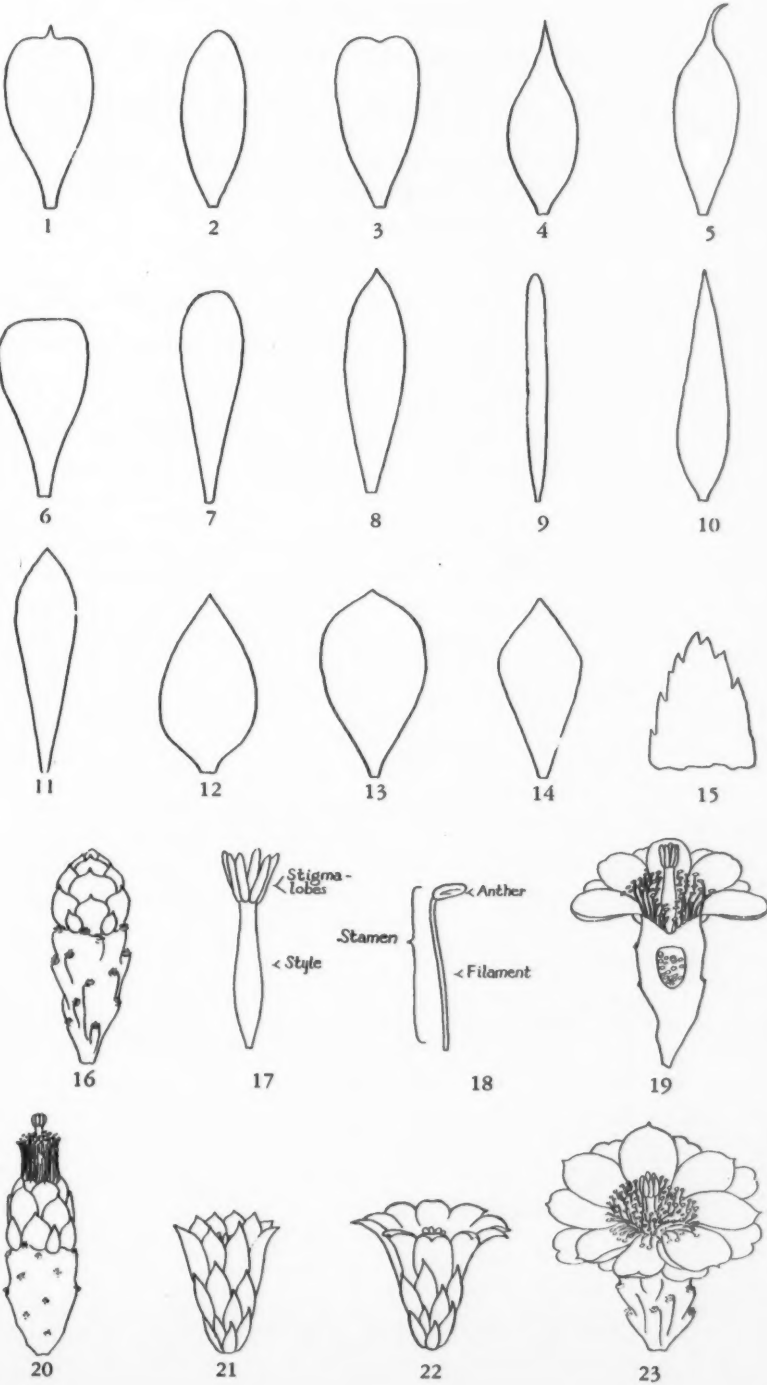
First. The petals and sepals are, in many cases, not sharply differentiated.

Second. The stamens are so numerous as to be almost uncountable.

Third. The ovary is not partitioned, although the occasional branching of the style indicates that this partitioning once existed but has been lost in the process of evolution.

GLOSSARY

- Fig. 1 *Mucronate*—Ending abruptly in a short, sharp point.
- Fig. 2 *Obtuse*—Blunt, or rounded at the extremity.
- Fig. 3 *Retuse*—Having a rounded end in which there is a slight depression, indentation or notch.
- Fig. 4 *Acuminate*—Ending in a long, tapering point.
- Fig. 5 *Caudate-acuminate*—Having a tail-like extremity.
- Fig. 6 *Truncate*—Ending abruptly.
- Fig. 7 *Spatulate*—Shaped like a spatula; oblong with an attenuated base.
- Fig. 8 *Oblong*—Length being two or three times the width.
- Fig. 9 *Linear*—Very narrow and elongate.
- Fig. 10 *Lanceolate*—Shaped like the head of a lance or spear, narrow, several times longer than broad, and tapering at each end.
- Fig. 11 *Oblanceolate*—Inversely lanceolate; tapering toward the base more than toward the apex.
- Fig. 12 *Ovate*—Egg-shaped.
- Fig. 13 *Obovate*—Inversely ovate.
- Fig. 14 *Rhomboid*—Oval and a little angular in the middle.
- Fig. 15 *Lacinate*—Having the edges of the apex jagged.
- Fig. 16 *Closely imbricated*—Overlapping like shingles on a house.
- Fig. 17 *Style and stigma-lobes*.
- Fig. 18 *Stamen*.
- Fig. 19 Cross-section of ovary showing ovules and position of style and stamens.
- Fig. 20 *Tubular flower*.
- Fig. 21 *Funnelform flower*.
- Fig. 22 *Campanulate flower*—Bell-shaped.
- Fig. 23 *Rotate flower*—Wheel-shaped with a very short tube.



SECOND ANNUAL CACTUS AND SUCCULENT SHOW of the Cactus and Succulent Society of America

Ambassador Auditorium, Los Angeles
May 29, 30, 31 and June 1, 1930
Classes and Winner

- | | |
|--|--|
| <p>A-1 SWEEPSTAKES
R. E. Willis</p> <p>A-2 BEST STAGED COLLECTION
1. Overbrook Nursery
2. Carl Hagenburger
3. Clark Gardens</p> <p>A-3 BEST RAREST CACTUS SHOWN
1. E. M. Baxter
2. Dr. Arthur Houghton
3. R. E. Willis</p> <p>A-4 BEST RAREST SUCCULENT SHOWN
1. Mrs. G. A. Frick
2. Phyllo Cactus Farm
3. Overbrook Nursery</p> <p>A-5 LARGEST COLLECTION OF DIFFERENT CACTI
1. G. A. Frick
2. R. E. Willis
3. Carl Hagenburger</p> <p>A-6 LARGEST COLLECTION OF DIFFERENT SUCCULENTS
1. Carl Hagenburger
2. R. E. Willis
3. Soldena Gardens</p> <p>A-7 BEST COLLECTION OF GRAFTED PLANTS
1. Dr. Arthur Houghton
2. R. E. Willis</p> <p>A-8 LARGEST COLLECTION OF DIFFERENT CRISTATES AND MONSTROSAS
1. Phyllo Cactus Farm
2. Weber Nurseries
3. R. E. Willis</p> <p>A-9 BEST COLLECTION OF FREAKS
1. R. E. Willis
2. Karl Frick</p> <p>A-11 BEST EXHIBIT FROM A DISTANCE—
Over 700 miles.
A. R. Davis, Marathon, Texas</p> <p>A-12 BEST COLLECTION OF CACTI AND SUCCULENTS—Entered by Juniors.
1. Karl Frick
2. Bob Frick
3. Billy Charles</p> <p>A-14 BEST COLLECTION OF SEEDLINGS—Cactus or Succulents under 2 Years.
1. R. E. Willis
2. Karl Frick
3. Bob Frick</p> <p>B-2 BEST COLLECTION OF OPUNTIAS
1. Ned Lawrence
2. J. A. Eklom
3. E. M. Baxter</p> <p>B-3 LARGEST COLLECTION OF EPIPHYLLUMS
H. M. Wegener</p> <p>B-4 BEST COLLECTION OF COLUMNAR</p> | <p>CEREANAE
R. E. Willis</p> <p>B-5 BEST COLLECTION OF HYLOCEREANAE
R. E. Willis</p> <p>B-6 BEST COLLECTION OF ECHINOCACTANAE
R. E. Willis</p> <p>B-7 BEST COLLECTION OF ECHINOCACTANAE
1. R. E. Willis
2. Wright M. Pierce</p> <p>B-8 BEST COLLECTION OF CORYPHANTHANAE
1. R. E. Willis
2. Mrs. Helen McCabe
3. Wright M. Pierce</p> <p>B-9 BEST COLLECTION OF RHIPSIDANAE
R. E. Willis</p> <p>B-11-100 BEST INDIVIDUAL CACTUS PLANT OF ANY GENUS</p> <p>B-11 SELENOCEREUS
Anna Shoenig</p> <p>B-12 ECHINOCEREUS
Mrs. Martha Dietrich</p> <p>B-13 EPIPHYLLUM
Anna Schoenig</p> <p>B-14 FEROCACTUS
1. Weber Nurseries
2. Roy C. Foote
3. Wright M. Pierce</p> <p>B-16 OPUNTIA
1. Bertha de Lecuona
2. Roy C. Foote
3. Bertha de Lecuona</p> <p>B-17 ECHINOCACTUS
Wright M. Pierce</p> <p>B-18 CORYPHANTHA
Wright M. Pierce</p> <p>B-19 SCLEROCACTUS
1. Wright M. Pierce
2. Clark Gardens</p> <p>B-20 CHAMAECEREUS
1. Weber Nurseries
2. Roy C. Foote</p> <p>B-21 BARSCHELLA
1. E. M. Baxter
2. Roy C. Foote</p> <p>B-22 COCHEMIA
1. E. M. Baxter</p> <p>C-1 BEST COLLECTION OF EUPHORBIAS
1. G. A. Frick
2. R. E. Willis
3. Karl Frick</p> <p>C-2 BEST COLLECTION OF MESEMBRYANTHEMOIDS
1. G. A. Frick
2. R. E. Willis
3. Arthur Menzies</p> |
|--|--|

- C-3 BEST COLLECTION OF ECHEVERIAS
1. Overbrook Nurseries
2. J. A. Eklom
3. R. E. Willis
- C-4 BEST COLLECTION OF ALOES
1. Overbrook Nursery
2. Carl Hagenburger
- C-5 BEST COLLECTION OF HAWORTHIAS, GASTERIAS AND APRICAS
1. R. E. Willis
2. Overbrook Nursery
- C-6 BEST COLLECTION OF SEDUMS
1. J. A. Eklom
2. John Dinsmoor
3. Albert Krejci
- C-7 BEST COLLECTION OF SEMPERVIVUM
1. R. E. Willis
2. Overbrook Nurseries
3. J. A. Eklom
- C-8 BEST COLLECTION OF CRASSULA
1. J. A. Eklom
2. R. E. Willis
3. Overbrook Nurseries
- C-9 BEST COLLECTION OF AGAVES
1. Overbrook Nurseries
2. Carl Hagenburger
- C-10 BEST COLLECTION OF STAPELIAS
1. J. A. Eklom
2. Karl Frick
3. R. E. Willis
- C-11-20 BEST COLLECTION OF ANY OTHER GENUS OF SUCCULENTS
Kate Sessions
- C-21-100 BEST INDIVIDUAL SUCCULENT PLANT OF ANY GENERA
- C-21 KALANCHOE
Kate Sessions
- C-22 MESEMBRYANTHUMS
Kate Sessions
- C-23 DUDLEYA
"Helianthus"
- C-25 EUPHORBIAS
1. Weber Nurseries
2. Mabel E. Thompson
- C-27 AGAVE
Mrs. M. Reich
- C-28 DYKIA
John Vosburg
- C-30 STAPELIA
Weber Nursery
- C-31 ECHEVERIAS
1. Weber Nurseries
2. Clark Gardens
- C-32 AEONIUM
Overbrook Nurseries
- D-1 BEST COLLECTION OF XEROPHYTES IN FANCY BOWLS
1. John Vosburg
2. Wilshire Rockcraft and Cactus Gardens
3. Mr. and Mrs. W. B. Arens
- D-2 BEST COMEDY LAYOUT
R. E. Willis
- D-3 BEST MINIATURE CACTUS AND SUCCULENT LANDSCAPE—Under 6 sq. ft.
R. E. Willis
- D-4 BEST MINIATURE CACTUS AND SUCCULENT LANDSCAPE—Over 6 sq. ft.
1. Mrs. J. C. Beatty
2. Mrs. E. T. Stoddard
- D-5 BEST MINIATURE CACTUS AND SUCCULENT LANDSCAPE—Professional, under 6 sq. ft.
1. Avery Brothers
2. Drisko Cactus Gardens
3. Mrs. Vanderstag
- D-6 BEST MINIATURE CACTUS AND SUCCULENT LANDSCAPE—Professional, over 6 sq. ft.
1. Avery Brothers
2. Drisko Cactus Gardens
3. Mrs. Vanderstag
- D-7 BEST XEROPHYTE BOWL—Amateur
1. Albert Krejci
2. Mrs. Lee Chambers
3. H. P. Brochelle
- D-8 BEST XEROPHYTE BOWL—Professional
1. John Vosburg
2. Miss Lulu Freeman
3. Mr. W. B. Arens
- D-9 BEST XEROPHYTE BOWL—Junior
1. William Robison
2. Alice Chambers
3. William Robison
- D-10 BEST LANDSCAPE GARDEN
1. Wilshire Rockcraft and Cactus Gardens
2. Overbrook Nurseries
3. Avery Brothers
- E-1 BEST DISPLAY OF METHODS OF PROPAGATION OF CACTI AND SUCCULENTS
1. John Dinsmoor
2. Karl Frick
3. R. E. Willis
- F-1 BEST EXHIBIT OF CACTUS GROWING AND HANDLING AIDS
1. John Dinsmoor
2. G. A. Frick
3. R. E. Willis
- G-1 BEST STRAWBERRY JAR
1. Overbrook Nursery
2. Clark Gardens
2. John Vosburg
3. John Dinsmoor
- H-1 COLLECTION OF INSECT PESTS AND PARASITES, INIMICAL MOULDS AND FUNGI
Complimentary exhibit by Los Angeles County Agricultural Commissioner.
- J-1 BEST COLLECTION OF PICTURES OF CACTI AND SUCCULENTS
1. Margaret Kincher
2. John D. Wright
3. Mrs. M. Estill
- J-2 BEST EXHIBIT OF CACTUS FRUIT
George Shaffer
- K-1 BEST SPECIAL DISPLAY
Desert Nursery—Palm Springs
- Special Entries:*
Mrs. Emma Gates—Bowl
Mrs. H. P. Brochelle—Scene
Dr. Jacolyn Manning—Living Desert Sketches
Mrs. Imogene Partridge—Photographs
Mrs. John D. Wright—Pictures and Seedlings
J. Lightfoot Forbes—Pictures
Charles Gibbs Adams—Succulents
Antone Blazic—Fairy Trees
W. B. Arens—Nest in Cholla
L. Sandra Deeth—Agave
Antone Blazic—Fairy Trees
Burton E. Gear—Cactuscraft
Roland Mayer—Desert Curios
George John Flower—Pictures
Miss Janet Riddle—Pressed Blossoms

Judges of Cacti

Mr. William Hertrich
Mr. Ernest C. Rost
Dr. Jacolyn Manning
Mrs. Edna Betts Trask, *Secretary to the Judges*

Judges of Succulents

Mr. James West
Mr. E. O. Orpet
Mr. Eric Walther
Boyd L. Sloane, *Secretary to the Judges*

List of Exhibitors

1. Robert Frick, Los Angeles, Plants.
2. J. A. Eklom, Pasadena, Plants.
3. Karl Frick, Los Angeles, Plants.
4. Miss A. L. Freeman, Eagle Rock, Landscape, Bowl.
5. Miss M. E. Thompson, Los Angeles, Plants.
6. H. P. Brochelle, Los Angeles, Plants.
7. John Dinsmoor, Montebello, Tools and Plants.
8. Miss Kate Sessions, Pacific Beach, Plants.
9. Mrs. G. A. Frick, Los Angeles, Plants.
10. Mrs. E. T. Stoddard, Whittier, Landscape.
11. Mrs. W. B. Hiett, Los Angeles, Plants.
12. E. P. Bradbury, Fontana, Plants.
13. H. M. Wegener, Los Angeles, Plants.
14. McCabe Cactus Gardens, San Diego, Plants.
15. Wilshire Rockcraft and Cactus Gardens, Los Angeles, Landscape.
16. Mrs. M. W. Dieterich, Los Angeles, Plants.
17. Miss Bertha de Leucona, Los Angeles, Plants.
18. Mrs. Lee Chambers, Eagle Rock, Bowl.
19. Overbrook Nursery, W. Hollywood, Landscape.
20. Mrs. M. C. Drisko, Verdugo Woodlands, Landscape.
21. Clark's Gardens, Pasadena, Plants.
22. George B. Schaffer, Tujunga, Fruit.
23. Mrs. John W. Estill, Los Angeles, Pictures.
24. Agricultural Com. of Los Angeles, Educational.
25. Burton E. Gear, Los Angeles, Cactuscraft.
26. Dr. A. D. Houghton, San Fernando, Plants.
27. R. E. Willis, Los Angeles, Tools and Plants.
28. G. A. Frick, Los Angeles, Tools and Plants.
29. Desert Nursery, Palm Springs, Landscape.
30. Phyllo Cactus Farm, Hollywood, Plants.
31. Billy Charles, La Canada, Plants.
32. Roland Mayer, Redlands, Desert Relics.
33. Dr. Jacolyn Manning, Pasadena, Living Sketches.
34. H. Lightfoot Forbes, Los Angeles, Plants and Pictures.
35. Helianthus, Topanga, Fancy Pots.
36. Roy C. Foote, Los Angeles, Plants.
37. Mrs. L. H. Jergensen, Los Angeles, Plants.
38. Grijalva Cactus Nursery, Los Angeles, Plants.
39. William C. Robison, West Los Angeles, Bowls.
40. Howard E. Gates, Anaheim, Landscape.
41. Steve Doleshal, Los Angeles, Plants.
42. S. Shima, Los Angeles, Plants.
43. Col. L. W. Jordan, Los Angeles, Plants.
44. Antone Blazic, Los Angeles, Fairy Trees.
45. Weber Nursery, North Hollywood, Plants.
46. E. W. R. Lawrence, Los Angeles, Plants.
47. Mrs. F. C. Stundes, Los Angeles, Plants.
48. R. H. Terrel, Riverside, Landscape.
49. Miss L. Sandra Deeth, Glendale, Plants.
50. Wright M. Pierce, Claremont, Plants.
51. A. R. Davis, Marathon, Texas, Plants.
52. E. M. Baxter, Bellflower, Plants.
53. Albert Krejci, Van Nuys, Bowl.

54. Mr. and Mrs. W. B. Arens, Los Angeles, Fancy Pots and Bowls.
55. Mr. and Mrs. J. C. Beatty, Van Nuys, Landscape.
56. Mrs. John D. Wright, Santa Barbara, Seedlings.
57. John D. Wright, Santa Barbara, Pictures.
58. Miss Margaret Kincher, Santa Barbara, Pictures.
59. Avery Brothers, Grossmont, Landscape.
60. Mrs. Robert B. Jones, Los Angeles, Plants.
61. Mrs. Vanderstag, Los Angeles, Landscape.
62. George John Flower, Pasadena, Pictures.
63. John Vosburg, Los Angeles, Fancy Pots and Plants.
64. Mrs. Imogene Partridge, Mills College, P. O. Pictures.
65. Soldano Gardens, Pasadena, Plants.
66. Miss Anna Schoenig, Los Angeles, Plants.
67. Arthur Menzies, Los Angeles, Bowl.
68. Carl Hagenburger, Los Angeles, Plants.
69. Miss Jean Abel, Glendale, Bowls.
70. Mrs. M. Reich, Bell, Plants.
71. Virgil Springer, Los Angeles, Bowl.
72. Miss Alice Chambers, Eagle Rock, Bowl.
73. J. A. Briggs, Jr., Los Angeles, Plants.
74. Miss Margaret Sedden, Los Angeles, Plants.
75. Mrs. Ruth Weger, Glendale, Fancy Pots.
76. Desert Flora Company, Los Angeles, Plants.
77. Mrs. H. P. Brochelle, Los Angeles, Scene.
78. Mrs. Howard Gates, Los Angeles, Bowl.
79. Mrs. P. J. Hummel, Los Angeles, Bowl.
80. Charles Gibbs Adams, Los Angeles, Plants.
81. Miss Janet Riddell, Los Angeles, Pressed Flowers.

250 entries—81 exhibitors.

Donors of Prizes

Los Angeles Chamber of Commerce, Cup.
Mrs. Bertha Norwood, Long Beach, Plants.
Mr. O. S. McKinney, Palm Springs, Plants.
Dr. A. D. Houghton, San Fernando, Cup.
Mrs. Henry Bangs Lewis, Los Angeles, Cash.
Mr. E. O. Orpet, Santa Barbara, Plants.
Mr. P. R. Bloodgood, Los Angeles, Cup.
Miss Kate Sessions, Pacific Beach, Plants.
Mr. Otto Roller, New Milford, N. J., Cash.
Col. L. W. Jordan, Los Angeles, Plants.
Mr. Elaine C. White, Litchfield, Conn., Cash.
Mrs. Susanna Bixby Bryant, Los Angeles, Cash.
Mr. E. W. R. Lawrence, Los Angeles, Plants.
Rust Nursery, Pasadena, Cup.
Mrs. Ann G. Powers, Oxnard, Plants.
Mr. R. F. Kado, Santa Monica, Aquarium.
Mr. R. E. Willis, Los Angeles, Cup.
Mr. J. C. Buttner, Pomona, Plants.
Mr. Hugh Evans, Santa Monica, Plants.
Mr. W. L. Maechtlen, Los Angeles, Plants.
McCabe Cactus Gardens, San Diego, Plants.
Miss Kate Walker, Santa Barbara, Cash.
Mr. Carl Ackerman, Los Angeles, Plants.
Mr. Charles Gibbs Adams, Los Angeles, Cup.
Clark Gardens, Pasadena, Plants.
Mr. Eugene R. Ziegler, Spencerport, N. Y., Seeds.
Col. Perrie Kewen, South Pasadena, Plants.
Mr. William Hertrich, San Marino, Plants.
Mrs. Frances Ghisi, Los Angeles, Plants.
Mr. E. P. Bradbury, Fontana, Plants.
Mrs. John D. Wright, Santa Barbara, Cup.
Mr. James West, San Rafael, Plants.
Mr. P. B. Crouse, Los Angeles, Cash.
Mrs. J. H. Bullard, Los Angeles, Plants.

Mr. Frank Kinnie, Los Angeles, Cash.
 Overbrook Nurseries, Los Angeles, Cash.
 Mr. and Mrs. H. Lightfoot Forbes, Los Angeles, Cash.
 Mr. H. P. Brochelle, Los Angeles, Bowl.
 A. J. Bauer Pottery Co., Los Angeles, Vases.
 Mr. G. A. Frick, Los Angeles, Plants.
 Cactus Shop, Florence, Ariz., Vases.
 Mrs. H. D. Thaxter, Glendale, Plants.
 Italian Terra Cotta Pottery Co., Los Angeles, Vases.
 Mr. M. Reich, Los Angeles, Cash.

Mrs. Henry Jannock, Pasadena, Cup.
 Mrs. Edna Betts Trask, Pasadena, Cash.
 Mr. H. M. Wegener, Los Angeles, Plants.
 Mr. Wright M. Pierce, Claremont, Plants.
 Pasadena Horticulture Society, Pasadena, Cup.
 Mr. W. Cornelius, Encinitas, Plants.
 Mrs. W. Graham, North Hollywood, Plants.
 Mrs. Margaret Bonyng, Los Angeles, Cash.
 Mrs. M. Mason, Hollywood, Cash.
 Mrs. E. A. Harris, San Antonio, Texas, Cash.

GLIMPSES OF THE SECOND ANNUAL CACTUS AND SUCCULENT SHOW

By an Observer

"The Show was a marvelous exhibition excellently presented." In these words an out-of-town visitor describes the Show held in the Ambassador Auditorium on May 29, 30, 31, and June 1. To give an adequate description of an exhibition of plants so unique and fascinating as are the cacti and succulents is next to impossible. Here we shall attempt to give but glimpses as we passed through the aisles of the Auditorium with its thirty thousand square feet of floor space which was entirely covered by the entries.

Upon entering the hall one stood amazed at the size, color and arrangement. A main aisle crossed the hall and from this the display benches were arranged at right angles. It is yet a mystery how a show of this type could be arranged with so much beauty, dignity and character. In every direction one saw a new picture differing from every other one.

In the cross aisle were placed delightful decorative features. An immense strawberry jar and a window basket of choice succulents were the contribution of Carl Hagenburger. Charles Gibbs Adams, who was chairman of the committee on decorative arrangement, added a most interesting garden stand with Mexican containers holding some very excellent and well grown succulents collected from various parts of the world. In the center of this aisle was the headquarters of the Journal and the information booth presided over by Business Manager G. A. Frick and his assistant, Mrs. H. P. Brochelle.

The two central and dominating features of the exhibit were directly opposite in nature. One, arranged by the Palm Springs Desert Nursery, had the flavor of the real desert. This exhibit was literally a piece of the desert transplanted to the hall. It contained *ocotillo*, *greasewood*, *acanthodes*, some *opuntias* and was crowned with a five-branched giant *Sabauro* which reached to the roof. It is estimated that this specimen weighs six tons.

Across the aisle was a delightful informal pool of volcanic rock arranged by the Wilshire Rockcraft and Cactus Gardens. With its colored lights and the lilies in bloom floating on the surface, it would grace the garden of any home.

Now let us turn to the right and pass the entries banked against the wall. Our first entry was that of John Vosburg who had ventured with a Futuristic arrangement in black and green for the setting of his xerophyte group. Mr. Vosburg's bowl with its choice arrangement for form and color harmony won first in the amateur class. We also found here a prize win-

ning strawberry jar. The adjoining entry covered at least five hundred square feet and was a general exhibit of choice specimens of both cacti and other succulents. This display of Carl Hagenburger's was most pleasing to the visitors.

Mrs. J. C. Beatty's arrangement of a desert landscape brought her a first in the Amateur Class and nearby Mrs. E. T. Stoddard had very cleverly reproduced a section of a garden wall in the crevices of which were succulents of different types.

There is no rose without its thorn and the Los Angeles County Agricultural Commissioner in his display informed us how to care for the mealy bug and other enemies of our favorite plants.

Two artistic entries came next. One, that of the Soldena Gardens, Altadena, contained specimens which almost turned the writer from a cacti enthusiast to one for other types. The other, equally as attractive in its manner, was one of both cacti and succulents. *Echeveria weinbergia* gave a fine balance and a blue glazed strawberry jar in the foreground completed the picture.

The Drisko Cactus Gardens presented one of the most artistic bits in the whole show. It was a desert scene of the Hopi country with a very excellent reproduction of a Hopi home in miniature with a blue desert sky in the background. Mrs. H. P. Brochelle entered a very lovely Japanese scene and Mrs. Emma Gates, who hold the record for being the oldest exhibitor, entered a bowl in the form of a camp kettle. Mr. Brochelle's entry was one of the few arranged strictly from the staging viewpoint. His large collection of cacti in black and orange pots were arranged before a background depicting California mountains.

From a solely educational standpoint, President Willis had the outstanding display in the entire show. He was untiring in his efforts to present a feature of the show that would be productive of good for those desiring to learn. Judging from the number of visitors with notebooks grouped about his benches, he accomplished his purpose. He is to be congratulated on the excellent arrangement of his plants in families and genera. The raising of plants from seeds was stressed by Mr. Willis in his exhibit and hundreds of seedlings in every stage of growth could be seen. To complete his list of entries, a collection of tools and other appliances used in the propagation and handling of plants was included.

The phyllocactus expert, Mr. H. M. Wegener of Los Angeles, won many favorable comments for his dis-

play. Although the height of the blooming season was over, there was a sufficient variety of blooms to show the gorgeous beauty of these plants.

In an adjoining corner was the entrancing landscape of the Overbrook Nursery. Beginning with a bit of low sandy desert the altitude increased until the proportions of a cliff were realized. Then it broke into a dry wash which threaded its way into the foreground. Bordering the wash were native *Dudleyas* and other succulents blending the whole into a most complete picture.

The remaining wall space was divided between Antone Blazic and Mr. Kado. Mr. Blazic has patented a novelty which he calls "Fairy Trees." An artistic artificial stem is surmounted with a growth of small succulents the shape and beauty of which gives the name, and carries one into the imaginary realm of gnomes and fairies. Mr. Kado's contribution was a collection of artistic containers planted only as Mr. Kado can do.

On the walls as a background for some of the exhibits was an arrangement of pictures. Mrs. J. W. Estill displayed a collection of water colors of cacti blooms. Also Miss Margaret Kincher of Santa Barbara. Mr. John D. Wright's contribution was photographs. Mrs. Imogene Partridge of Mill's College P.O., sent a series of enlargements which were unique. Nature has many modernistic patterns as these prints showed. An interesting assortment of pictures was shown by Mr. H. Lightfoot Forbes. Some of them were many years old and two were formerly the property of Mr. Hovey for whom the favorite *echeveria* is named.

On the inside benches, Mr. G. A. Frick's entries consisted of his enviable collection of *Euphorbias* for which he won a first, and of his extensive display of cacti. His collection of *mesembryanthemums* which won first must not be omitted. Not to be outdone, Mrs. Frick entered her collection of succulents and won first prize for the rarest succulent in the show, an unnamed *Kalanchoe*. Dr. Arthur Houghton, President Emeritus, displayed some wonderful crests and grafts for which he won a first. In this display was shown the new *Ferocactus brittonia davisii* which was discovered by Mr. A. R. Davis of Marathon, Texas. Mr. Davis is an enthusiastic member of the Society and sent a splendid showing of native Texas cacti to be exhibited. This collection contained several unnamed varieties.

Mr. J. A. Briggs, Jr., of the Ambassador Hotel, was generous in his contribution of a general display of xerophytes which were shown to good advantage. An exceedingly bright spot was created by the entry of Mr. W. B. Arens. Navajo rugs formed the background for a collection of fancy pots and bowls of rainbow hues. *Helianthus* of Topogano and Mrs. Ruth Weger of Glendale also featured fancy containers.

Desert landscapes were featured by Avery Brothers of Grossmont and Mrs. Vanderstag of Los Angeles. That of Avery Brothers was the typical piece of desert in the show. An interesting background showing a covered wagon dominated Mrs. Vanderstag's entry. Mr. J. A. Ekdom's ever-winning prize plants were much in evidence.

Something unusual, termed by many as bowls, was offered by Dr. Jacolyn Manning of Pasadena. These are in reality living sketches—exquisite arrangements of color harmony of rock and plant. Mr. John George Flower, also of Pasadena, exhibited some paintings of desert scenes which formed a background for Dr. Manning's sketches.

Many lovely bowls were shown. In the junior class, Miss Alice Chambers, William Robison and Arthur

Menzies made creditable contributions. Mrs. Lee Chambers, Albert Krejci, Miss A. L. Freeman, Miss Jean Abel, Mrs. Howard Gates, Mrs. P. J. Hummel and Virgil Springer exhibited in the senior division.

The youngest exhibitor, Billy Charles, made a fine showing for a boy of eight years and when it comes to names, Billy sounds like a veteran. Karl and Bob Frick showed the training along exhibition lines given by their experienced father. Each made several entries of plants which would do credit to a professional. Karl displayed *stapelia* blooms in alcohol which helped to win for him a prize for *stapelias*.

One of the most interesting of all exhibits was that of Mr. E. O. Orpet of Santa Barbara, who displayed a collection of seedlings and rare plants. *Lithops pseudotrunatellum*, the longest name in the show, I think, could scarcely be distinguished from the stones in the pot in which they were shown. Mr. E. W. R. Lawrence has chosen for his specialty the *opuntias* and won a first for his excellent entry in that line.

The bench occupied by the Phyllo Cactus Farm was artistically arranged. Large *cereus monstrosus* in fancy containers lined the center of the bench. Well spaced about these were smaller *monstrosas* and crests on one side and gorgeous specimens of succulents on the other. The Weber Nursery showed some marvelous crests among which was a splendid *ferocactus acanthodes*. Adjoining the Weber entry were those of Howard E. Gates who reproduced a desert scene with native cacti, and John Dinsmoor whose general collection elicited favorable comment. Mr. Dinsmoor's entry, showing the propagation of succulents, deserves much credit.

An unusually interesting exhibit was that of Mrs. John Wright of Santa Barbara. It consisted of a cabinet in which were about twenty seedlings together with colored pictures showing each plant in its mature state.

Mr. Bradbury of Fontana showed what can be done in the way of raising our cacti by exhibiting specimens from a few weeks old to those which had reached their second birthday. Wright Pierce of Pomona displayed in various sizes *polyanthes* and some of the *coryphanthas*.

In the collection of E. M. Baxter was a *cocchemia*, declared by the judges to be the rarest cactus in the show. The McCabe Cactus Gardens of San Diego exhibited *neomammillarias* of exquisite beauty.

Although our descriptions are sketchy, mention must be made of the *kalanchoe* and *mesembryanthemums* of Miss Kate Sessions, each a prize winner. Those who contributed but a few plants add much to the success of the show. Here and there were bits that differed from the larger collections. We noted in this group the exhibits of Miss M. E. Thompson, Mrs. W. B. Hiett, Mrs. M. W. Dieterich, Miss Bertha de Lecuona, Roy C. Foote, Steve Doleshall, Mrs. L. H. Jergensen, S. Shima, Col. I. W. Jordan, Mrs. F. C. Stunden, R. H. Terrel, Miss L. Sandra Deeth, Miss Anna Schoenig, Mrs. M. Reich, the Grijalva Nursery and the Desert Flora Company. Our attention was also drawn to Miss Janet Riddell's collection of pressed blossoms and to Mr. Rowland Mayer's group of desert curios showing that he had succumbed to the lure of the desert in a somewhat different manner.

As we turned toward the door we found a charming phyllo-cactus—a Kaiserin Augusta Victoria—in full bloom. It was a pleasant close of a visit all too short in which to appreciate the beauty and the character of the type of plants there represented.

Much credit is due the Show Committee and the exhibitors for the excellent piece of work which transformed a barren hall into a place of beauty and interest.



CRISTATES

By HOWARD E. GATES

During my wanderings amongst the cactus in Baja California, quite a discussion of cristate forms has arisen in the Journal. This is one of the subjects I do not know anything about, but I have seen quite a bit. My wanderings uncovered many cristate *Macherocherens gummosus*, a number of *Lemaireocereus thurberi* (Pithaya Dulce), three *Lophocereus schottii*, one *Pachycereus pringleii* (Giant Cardon), and one *Neomammillaria*.

The most noticeable thing about these cristates was, that where one was found, there were almost sure to be several more close at hand. There were times when several hundred miles was covered through seemingly millions of cacti without finding any and then in a spot a few yards across there were several. In a canyon

twenty-five miles north of Cape San Lucas, a cristate *M. gummosus* was first observed, then three more side by side and a little farther a giant *pringleii* raised more than fifteen cristate heads toward the heavens.

In a canyon near Comondu Viejo were many cristate *M. gummosus* and a number of *L. thurberi*, one of which was an immense plant with every branch flattened and more or less contorted. A picture of a portion of this plant shows one large flower bud and several smaller ones on a cristated branch. The growth of this plant was so dense that a photograph showing a general view of it failed to reveal the details satisfactorily.

Near Calmalli, on one side of the road is a freak *L. schottii* and on the other side of the road

are two others. There may have been more that were cut out when the road was built. These three plants do not appear to have grown from branches that were cut off and thrown aside from a single parent plant. These plants are not flattened and twisted. Instead of the customary ribs, these are covered entirely with pyramidal protuberances, irregularly placed. They also have lost all signs of spines.

Several months collecting last fall in a Nevada district failed to produce a single cristate. Judging from these experiences there may be

something in the locality that causes cristating.

The cristate forms of *M. gummosus* and *L. thurberi* seem to be short lived. Whether this is due to cristating or not is hard to determine as plants of these two varieties are often full of dead wood.

ED. NOTE.—Many of our readers have seen Mr. Gates' brochure recounting his travels and trials in Baja California, which goes to prove that hardships and thorns are merely incidental to your true cactus collector.—M. N. L.

BOOK REVIEWS

By JAMES WEST, *San Rafael, Calif.*

STONE-SHAPED PLANTS. By R. Marloth. (Reprint from The Journal of the South African Biological Society, vol. VI.) 8 pp. 4 halft. 4 col. pl. (The Specialty Press of South Africa, Ltd., Cape Town, 1929.)

This paper by the well-known South African botanist is as interesting as it is short, and will appeal especially to our *Mesembrianthemum* fanciers.

It is a discussion of that remarkable form of adaptation of surroundings, often called protective mimicry, so notable a feature of the South African *Mesembrianthemum* flora. Dr. Marloth ties his remarks to a presentation in word and picture of four typical mimicry-species, *Titanopsis*, *Calcareia* Schw., *Lithops lesliei* N. E. Br., *Argyrodema testiculare* (Thunb.) N. E. Br. and *Didymatous lapidiformis* (Marl.) N. E. Br.

The term "mimicry," formerly employed by the author, is here rejected for carrying the erroneous implication of a purpose, which would manifestly run counter to the accepted theories of evolution by survival. It is really astonishing to learn how close is the assimilation in appearance of plant to surrounding stone, and how strict the limitation of the different species to only such localities where the particular rock they resemble occurs. The lithographic plates in color, which are a distinct feature of the little volume, give a most graphic picture of this similarity, although, according to the author, the artist has in some of them exaggerated the difference rather than the similarity, so that in nature the plants resemble the rock even more closely than is evident from the illustration. Two of them, those of *L. lesliei* and *T. calcarea* are familiar from Marloth's Flora of South Africa where they first appeared.

Perhaps most extraordinary of all is the case of *Didymatous lapidiformis*. This plant, consists,

like *A. testiculare*, of two pairs of leaves, one of which, the older, is of a rusty brown, the younger being slate gray. Now it occurs only, but then in abundance, in such localities where two kinds of shale fragments are found intermingled, one rust-colored, the other slate-colored, each kind exactly matching in hue the corresponding one of the two leaf-pairs.

The theoretical part of the paper, in which the author tries to account for the causes of simulation, is very interesting. While still admitting that in part it is of considerable survival value by making the plants inconspicuous to browsing animals, the author maintains that evolution by elimination of the unfit cannot serve as the sole explanation of the phenomenon. In proof he cites the fact that many species take on the appearance of the surrounding rock, but without thereby becoming inconspicuous. So "white quartz plants," like *Gibbaeum pubescens* and *Rimaria roodiae*, while bearing the closest similarity in color and texture to the white quartz fragments of their habitat, yet form such noticeable clumps as to be distinctly conspicuous even at night. Such facts seem warrant enough to the author to search for other explanations than a weeding out of the unfit by the normal processes of evolution.

He suggests some direct influence of surroundings acting on the plants. In support he introduces General J. C. Smuts' theory of Holism, which predicates a sensitiveness of all organisms to local "fields" of environment. Dr. Marloth does not pretend to be able to explain just how such an influence could work on the plants in a way to change their appearance, indeed he implies the probability of its being unexplainable by the methods of exact science, ending almost on a note of mysticism with the old words *ignoramus—ignorabimus*, we do not know—we shall not know.

POPULAR NAMES FOR CACTI IN THE CAPE REGION OF BAJA CALIFORNIA, MEXICO

By EDGAR BAXTER

Common names are to be pronounced according to regular Spanish rules of pronunciation.

<i>Lemaireocereus thurberi</i>	Pitaya dulce
<i>Machaerocereus gummosus</i>	Pitaya agria
<i>Pachycereus</i> , all species.....	Cardon
<i>Cylindropuntias</i>	Cholla
<i>Opuntia burrageana</i>	Clavellina
<i>Platyopuntias</i> (native).....	Tuna
<i>Platyopuntias</i> (introduced).....	Nopal
<i>Cochemia halei</i>	Casa de rata (Rat house)
(Magdalena and Margarita Islands)	

Neomammillarias, *Echinocereus*,

<i>Cochemias</i> , <i>Bartschella</i>	Pitayita
<i>Lophocereus</i> , both species.....	Garambullo
<i>Ferocactus</i> , all species.....	Visnaga
<i>Wilcoxia striata</i>	Jarramatraca, macamatraca

"Cardon barbon" mentioned in Britton and Rose, I found applied to any *Pachycereus* that grew near the coast and had a "beard" of moss growing on it. "Cholla" is applied to all of the *cylindropuntias* resembling *Opuntia cholla*. "Clavellina" is not *Opuntia clavellina*. The whole group of *Neomammillarias*, *Chochemias*, *Echinocereus*, and *Bartschella* are called "Pitayita," diminutive of "pitaya," because of their fruit, which more or less resembles that of the larger plants.

Introduced *platyopuntias* are of the so-called "Burbank Spineless" type with large, nearly spineless stems and fruit.

Cardons, *Pitayas*, *Tunas*, *Nopals*, are valuable for their fruit. In the latter two, the young branches are also used for a food dish.

The fruit of the *Lophocereus*, "garambullo," is used as an emetic, and is not edible as a food. The tuberous roots of *Wilcoxia striata* are used to prepare a poultice or plaster for lung troubles.

The derivation of the names "Cholla," "Clavellina," and "Visnaga," I could not learn from conversation with the Mexicans.

Several of the *platyopuntias* have local names such as "Tuna moraga"—from the maroon-colored fruit, or "Tuna silvestri"—wild or native tuna, etc.

I found *Nyctocereus serpentinus*, in a garden, called "Flor de la noche" and an *Epiphyllum* called "Reina de la noche"—"flower of the night" and "queen of the night."

An Aloe, evidently introduced but very common, is called "Sabila." Agaves are called "Mescal."

The botanic language of the people is very limited, and unless a plant is used for food, or as a medicine, or else is so common as to attract attention, it has no name and is classed as a nameless weed. Some, such as the smaller cacti included in the group called "Pitayita" are classed together because of their apparent resemblance to each other or to a named plant.

Many of the cacti are isolated and known only to the one or two adjacent ranchos. They may or may not have a popular name, depending upon the inventiveness or keenness of observation of the natives who live near. This is true of *Opuntia invicta*, *Machaerocereus eruca*, *Opuntia pycnantha*, and others that grow (in the Cape region) near small ranchos which are 20 to 50 miles apart.

ED. NOTE.—Mr. Baxter finds time at his Boy Scout camp to write an article on his Mexico trip which we hope to publish in our August issue. Weinberg, Gates, and Baxter view that entrancing country through different lenses, to the education and entertainment of our readers.—M. N. L.

EXCHANGES

Mail in your list of plants you have for exchange, together with a stamped, addressed envelope, before the 5th of the month and your list will be published in the Journal the following month. Communications from collectors with small collections who desire a single plant are welcome. Nurserymen are also invited to write and perhaps exchanges can be arranged. Many offers are needed to make this column a success and all members are urged to co-operate.

Don't forget the exchange counter every meeting. Bring your duplicate plants or cuttings and get the habit. *Exchange*.

Want to buy or exchange *Euphorbias*, *Echeveria*, *Sempervivums*, and cactus plants of rare types.

Native Texas cactus, want *Euphorbias*. 100 different *Opuntia* and *Nopalea* cuttings, some rooted, only a very few named. Want any rare plants. Will exchange ten to one.

Six varieties of *Echinopsis*, 1½-inch buttons, want any Mexican cactus.

Many rare varieties of exotic seedlings, want *Euphorbias* or other good plants.

Nice sized plants of *Aloe Streatia*, *Petricola*, *Davyana*, *Peglerae*, *Acculeata*, *Wickensii* in exchange for succulent plants, preferably *Haworthias*, *Gasterias*, *Agaves*, *Apricas*, *Euphorbias*, *Mesembrianthemums*.

CATALOGUS CACTACEARUM CHILENSIUM

Catalogo de las Cactaceas chilenas

By GUALTERIO LOOSER

(A translation by DR. BRITTON)

The following enumeration of the Cactaceae of Chile is based almost exclusively on the magnificent work of *N. L. Britton* and *J. N. Rose* entitled "The Cactaceae — a Description of Plants of the Cactus family" (Washington 1919-1923), in four volumes, illustrated by a multiplicity of drawings, photographs and colored plates. This revision was made with the greatest quantity of material that can be imagined and without sparing expense or effort. After the study of the already known literature and material accumulated in the United States, the authors visited the majority of the large herbaria, and explored the principal and greater part of the three Americas in order to observe and collect living examples, having frequently to conquer enormous obstacles in order to reach the inaccessible localities where many of the Cactaceae grow. *Dr. Rose* was in Chile in 1913 and collected here abundant material.

As a result of these careful studies, the authors were obliged to modify considerably the classification of the Cactaceae. Whereas *Schumann*, the previous monographer, admitted only twenty genera, *Britton* and *Rose* described one hundred and twenty-six genera, and this increase is not due to many new species. They divided the genera and in those which refer to Chile it will be noted that there is a rehabilitation of various genera founded by *R. A. Philippi*, which had been discarded rather lightly by *Schumann*. The descriptions and keys of the Chilean Species in the work of *Britton* and *Rose* are clear and

simple, and furthermore with the aid of the fine illustrations it is sufficiently easy to obtain the names.

In making this enumeration, my object has been to place to a certain extent, the great work of *Britton* and *Rose*, as far as it refers to Chile, at the disposition of our National Naturalists, as its high price makes it difficult that the original work should be much known among us. Also I hope that my catalog will be of some utility to those interested in these plants. The students of Cactaceae abound in all parts of the world and it is to be desired that here also the small number of devotees should be increased in order to increase the cultivation of these plants, "quiscos." We have very handsome species, and many are scarcely known, principally those from the North.

Finally, my thanks are due to *Professor D. Francisco Fuentes*, Chief of the Planeorganic section of the National Museum for facilitating me in consulting "The Cactaceae"; to the famous botanist *Dr. N. L. Britton*, coauthor of this work, and Director of the New York Botanical Garden, who replied most attentively to various questions which I asked about certain of the Cactaceae cited in my catalog, and to *Professor Dr. Carlos E. Porter* for the honor which he does me in giving cordial hospitality to this simple work in the accredited pages of his "Revista Chilena de Historia Natural," which has been published for one-third of a century.

Santiago, May, 1929.

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THE GENUS OPUNTIA, SERIES VII FULGIDAE

By DR. ARTHUR D. HOUGHTON

The name *Fulgidae* for this Series means flashing, shining—and must refer to the flower. This Series has much branched, bushy plants, with terminal joints very fleshy, and tubercles broad and low, and about as broad as long, thus differentiating them from Series VI, *Imbricatae*, in which the tubercles are narrow, high, and laterally flattened.

The *Fulgidae* have, in common with all the preceding Series, paper sheathed spines, so they are easy to differentiate from all the Series that follow in the subgenus *Cylindropuntia*, which have spines without sheaths; and, indeed, from all other *Opuntias*, by this single character.

Britton and Rose recognize five species in this Series, ranging the southwestern United States and western Mexico.

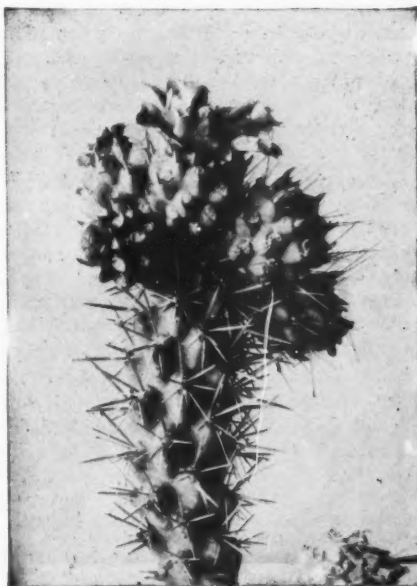
O. fulgida Eng., is easily separated from the others of the Series by having joints which are readily detached and which fall off freely. It is found in gravelly and sandy situations in southern Arizona, Sonora and Sinaloa where it grows up to 14 feet high. It has a definite woody trunk from 7 to 14 inches in diameter, much branched, frequently forming a compact, flattened crown; terminal joints are from 7 to 14 inches long—and from 1½ to 2 inches in thickness; spines 2 to 12, yellowish to brown, 1 to 1½ inches long, needle-shaped with loose papery sheaths; glochids small, whitish to light yellow; flowers pink, 1 to 1½ inches wide; stamens and style very short; fruit 2 inches long, very proliferous.

This species is very common in southern Arizona, and its sharp barbed spines and detachable joints make it a bad one to play with.

The fruit is proliferous—one fruit growing out of another, in chains up to as many as 14. Several of these chains of juicy fruits, growing from a single joint, make a juicy mass, usually spineless for grazing animals.

O. spinosior Eng., *O. prolifera*, *O. alcabes*, have joints which are not readily detached, do not fall off; *O. spinosior* and *O. prolifera* have spines which are brown or reddish, at least at the base, while the spines of *O. alcabes* are white and those of *O. burraglana* are yellow.

O. spinosior has slender branches compared with *O. prolifera*; while the fruit of *O. spinosior*



O. prolifera

is not proliferous, that of *O. prolifera* is distinctly so. Its distribution is Arizona, western New Mexico, and northern Mexico. This species is tree-like in habit, about 12 feet in height, with usually woody trunk. Ultimate joints 4 inches long, often bright purple; from 6 to 25 spines, very short; glochids a yellowish white; flower buds short; flowers 2 inches across, purple, pink, yellow or even white; fruit yellow, spineless, nearly 2 inches long with a deep navel.

O. prolifera Eng. from the San Diego region of California, has stems up to 6 feet high, with trunk and old branches terete and woody. It has to be carefully differentiated from *O. serpentina* from the same region, and attention is called to cactus collections of that region that material of those two sorts is needed for careful study. Flowers are small; the fruit is proliferous, 1 to 1½ inches long.

Another form closely related growing only

about 15 inches high has been collected near Newport in Orange County, California. This ought to be studied in connection with the two previously mentioned forms. A fourth form collected by Dr. Rose on the West San Benito Island off the west coast of Lower California may be studied in the same connection.

O. alcabes Weber, from Lower California, grows to about 1 yard in height, is very much branched and very spiny, especially when old. Its prominent diamond-shaped tubercles and $\frac{3}{4}$ -inch long leaves and short greenish yellow petals, characterize it fairly well; the fruit is globular, small and yellowish.

O. burrageana B. and R. with yellow spines and red petals, is from the hills of southern Lower California, forms a bush rarely a yard in height. Its leaves are $\frac{1}{8}$ of an inch long, soon falling off; stems slender, $\frac{1}{2}$ to $\frac{3}{4}$ inch in diameter; its globular fruit is not proliferous, $\frac{3}{4}$ inch in diameter, slightly tuberculate. This is another species worthy of more extended study.

There is a rather wide jump between this series and Series VIII the Vestitae, which are all from South America.

EDITORIAL

In course of a twelve-month a dozen numbers of the CACTUS JOURNAL have edged their way into the hearts and intelligences of men of science the world over—botanists, horticulturists, specialists, gardeners, to say nothing of the fast-growing horde of cactus "fans," who knew little about their evil-looking holdings, but who wished to know more. "A fad is a fad," they said, "and we must carry on." And they did.

Today, as Number 13 comes out, many of these men and women who began cactus cultivation because it was the vogue to own a cactus garden, are sincere students, helped along, both by precept and example, by such men of eminence as Dr. Britton, James West, William Hertrich of the Huntington Botanical Garden, N. E. Brown of Kew Gardens, England; William Orpet of Santa Barbara, Ernest F. Rost of the Smithsonian Institution and Alhambra, and Mrs. Bolus of South Africa.

Shall we of lesser fame fail to support and encourage the Journal and the organization behind it, when such outstanding scholars praise its value and are willing to contribute their time and experience to its pages?

Dr. N. L. Britton, than whom there is none whomer, (if we may be allowed to use current collegiate in describing so august a personage) is immensely interested in our efforts, so much so that the Journal announces a number of articles from his pen during the coming year. That fine old patriarch in the mesembrianthem fields, N. E. Brown of Kew Gardens, has promised to find time to enlighten us on his hobby; but he writes a bit sadly that he is over 80, and must finish his work on Mesembrianthemums, taking much time and care as to details, lest it be of no value to scholars who come after him.

James West, our California enthusiast on Succulents, is a most loyal friend, contributing to every number in Vol. I. Through such co-operation as this, we prosper, and our readers will look forward to promised articles for Vol. II. So also with James Orpet, Eric Walther, J. A. Frick and that delightful woman, Ysabel Wright, who has planned a unique Students' Cactus Garden, and yet found time with her artist-secretary, Margaret Kincher, to illustrate for the Journal many botanical terms used in describing cactus.

William Hertrich, though an international figure in the scientific world yet belongs particularly to our Society through his connection with Huntington Gardens, and we expect a word from him before long.

Ernest Rost has several fames besides that of field agent for the Smithsonian. A few years back he was living in Central America and hunting the fauna of that country for the New York Gardens, and before that, all of us who were married in the 90's remember that no list of wedding presents was complete without a handsome etching, usually a marine, with the signature of Ernest F. Rost. Both gentlemen, together with Dr. Jacolyn Manning, further showed their interest in our career by acting as judges at the recent cactus show, and contributing rare plants to the prize list.

Coming closer into our intimate circle is Dr. Houghton, emeritus president, and also a man of many interests, who gave and is still giving of his vast store of attainments to this Society who gratefully acknowledge his labors for our benefit.

Friends, this is your magazine. Help us, during the coming year as you have in the past, to make it what you want it to be. Those who ride hobbies should ride for our benefit.

MARY NORWOOD LAWRENCE.

Progress is being made towards reprinting The Cactaceae by Britton and Rose and a full report will be made as soon as final arrangements have been made. The large number who expressed their interest in this work will be given an opportunity to help.

Many subscribers have already mailed their first 12 issues to the Editor for binding and these will be carefully guarded and returned in good condition as soon as the Index is printed. Those who have not sent in their first 12 copies for binding should do so within the next 30 days so that all binding may be done at one time. Binding costs \$2 per set or you may reserve a bound copy for \$6.00.

The next issues will carry reviews, current books, magazines and articles. Many fine articles have appeared recently by Dr. Manning and her work is appreciated by all cactus enthusiasts. Mr. Gates' book is extremely interesting and will also be reviewed.

S. E. H.

The annual cactus and succulent show and convention of the German Kakteengesellschaft will be held in Stuttgart, Germany, from July 5th to 7th, inclusive, a very interesting program has been arranged, and a large attendance is expected.

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SECRETARY'S NOTES

The July meeting of the Society will be at the home of Mr. Henry E. Jaeger, 620 East Central Avenue, Sierra Madre, on Sunday afternoon, July 20th, at 2 o'clock. Central Avenue runs the full length of Sierra Madre and may be reached from any street running north from Foothill Boulevard into town. 620 is near the east end not far from the double drive in Arcadia.

Mr. Jaeger does not claim to be a cacti or succulent expert but he has one of the most interesting gardens that it has been my privilege to visit. Come and see what interest and labor can do.

At this writing no special program has been arranged. There may be a speaker but none is assured.

As announced in the May issue of the Journal, the meeting for that month was held at the Rancho Santa Ana, home of Mrs. Susanna Bixby Bryant. There were about seventy-five members who made the trip. The Ranch and its purposes have been described before, and, after the visit, it is easy to picture the unlimited possibilities for development as outlined by Mrs. Bryant to the members. The home crowns the top of a hill and is reached by a winding road. From this vantage point one can see for miles up and down the valley.

A trip over the grounds was made after which the hostess served refreshments. A cordial invitation was extended to the Society to meet at the Rancho again at some future date. We take this opportunity of expressing to Mrs. Bryant our hearty appreciation for her hospitality.

One of the largest meetings of the year was held in the Los Angeles Public Library on June 21. About two hundred persons were present to hear Mr. Court-nay Monsen lecture on the "Lure of the Desert." Mr. Monsen is Secretary of the Pasadena Board of Education, an experienced lecturer and photographer. The slides used by Mr. Monsen were from the collection of the speaker's father, the late Dr. Frederick Monsen. In his lecture Mr. Monsen spoke of the early life of the Monsen family in Norway and how it contributed toward the inheritance of an exploring spirit by his father. Later, scenes were shown of early days in the American deserts and many experiences of Dr. Monsen were related. Several delightfully colored slides of desert wild-flowers in bloom and many pictures of Mexican cacti were in the collection. The audience was appreciative of Mr. Monsen's talk and felt that he had imparted that spirit which does lure one to the desert.

The Show is over! Echoes still remain. Some in the form of hours of work yet to be done. We offer our apologies to those whose membership cards have been delayed in mailing or whose letters have remained un-

answered. The work in connection with the show, coming at the close of the school year when the activities of our elementary schools were numerous, has necessarily slowed up the work of the Secretary. The Show was wonderful, wasn't it? We are glad to have had the opportunity of serving in so conspicuous an event.

Do the members realize that the work of the officers is purely voluntary? No officer receives any compensation for his services. Once in a blue moon a thorn is found among the flowers and, no doubt, it is because someone doesn't understand. An apology is offered to all members who had renewed their memberships prior to the mailing of the June issue on which was stamped a little reminder. Just a slip which we trust will not occur again.

It is most encouraging that in practically every letter containing a remittance for renewal of membership kind words are expressed as to the quality of the magazine or good wishes are extended for the prosperity of the Society.

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